PROPOSED LIVESTOCK GRAZING MANAGEMENT

OTAY

Draft Environmental Impact Statement

United States Department of the Interior
Bureau of Land Management
CALIFORNIA DESERT DISTRICT

United States Department of the Interior

IN REPLY REFER TO
1792
(C-064)

BUREAU OF LAND MANAGEMENT
California Desert District
1695 Spruce Street
Riverside, California 92507

Dear Reviewer:

Enclosed for your review and comment is the Otay Draft Environmental Impact Statement prepared on proposed grazing management for the Escondido Project Area of the California Desert District, California.

The statement was prepared pursuant to Section 102 (2) (c) of the National Environmental Policy Act of 1969. It is based on information from the Bureau of Land Management and other sources, including Federal, State, and local agencies, and interested private organizations and citizens.

Comments on the environmental statement should be received by this office no later than , in order to be included in the Final Statement. Comments received after the 45-day review period will be considered in the subsequent decision process, in the event the comments are received too late for inclusion in the final statement. Your comments should be returned to:

Otay Grazing EIS
c/o District Manager
California Desert District
Bureau of Land Management
1695 Spruce Street
Riverside, California 92507

Sincerely,

Gerald E. Hillier
District Manager

Enclosure

DEPARTMENT OF THE INTERIOR

OTAY GRAZING

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

Prepared By

BUREAU OF LAND MANAGEMENT

DEPARTMENT OF THE INTERIOR

Ron Hall

STATE DIRECTOR, CALIFORNIA STATE OFFICE

OTAY GRAZING
ENVIRONMENTAL IMPACT STATEMENT

Type of Action: (X) Draft ( ) Final Environmental Impact Statement

(X) Administrative ( ) Legislative

For Further Information Contact: Escondido Project Manager
California Desert District
Bureau of Land Management
1695 Spruce Street
Riverside, California 92507

Responsible Agency: US Department of the Interior
Bureau of Land Management
California State Office

Location of Action: Parts of the following Counties in Southern California:

Los Angeles
Riverside
San Diego

Scope: This draft environmental impact statement is a broad scope analysis of the proposed Otay Grazing Management Plan. Environmental assessments will be prepared on allotment management plans and range improvement projects as appropriate.

Abstract: The Otay Grazing Environmental Statement analyzes effects of livestock grazing on approximately 55,000 acres of public land. The proposed action and three management alternatives presented are analyzed in terms of their economic, social, and environmental effects. Major impacts of the proposed action include reintroduction of successional stages of vegetation in chaparral areas identified for prescribed burning and potential impacts on rare, threatened, and endangered plants.

Date by which comments must be received:

Location to which comments must be sent: ATTN: Otay Grazing EIS
Gerald E. Hillier
California Desert District Manager
1695 Spruce Street
Riverside, California 92507

SUMMARY

This EIS examines four alternatives:

1. Proposed Action (Continue Present Management)
2. Increased Livestock Grazing
3. Decreased Grazing
4. No Grazing

Concerning Livestock Grazing:

1. On 55,000 acres
2. In the California Desert District, Escondido Project Area

General Land Use Goals Are:

1. Reduce hazardous fuel loads
2. Protect archaeological, historic, wildlife, and wilderness resources as required by law
3. Protect rare, threatened, and endangered plants

No significant issues concerning livestock grazing have been identified.

TABLE S-1
ALTERNATIVE AND IMPACT SUMMARY

Major Actions	Existing Situation	Proposed Action	Livestock Increased	Decreased Livestock Grazing	No Grazing
ALLOTMENT CATEGORIES					
Intensive Allotments	0	6	15	6	--
Custodial Allotments	28	22	22	6	--
FORAGE ALLOCATIONS (AUMs)					
Livestock	4378	4378	5848	3972	0
RANGE IMPROVEMENTS NEEDED					
Fences (miles)	5	5	35	5	0
Springs	8	8	20	8	0
Reservoirs	2	2	4	2	0
Prescribe burn (acres)	5,000	5,000	20,000	5,000	0
Impacted Resource					
AUM Increase after burning	0	770	2,620	770	0
RARE PLANTS					
No. Highly Susceptible to Impact From:					
- Grazing	7	7	9	7	0
- Fire	0	9	12	9	0
SOCIO-ECONOMIC					
No. operators substantially impacted (Class I Allotments) (+/-)	0	+2	+2	+2	-3

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CHAPTER 1

INTRODUCTION

PURPOSE

Manage grazing in accordance with:

1. Taylor Grazing Act, 1934
2. National Environmental Policy Act, 1969
3. Federal Land Policy and Management Act, 1976
4. Endangered Species Act of 1973 as amended in 1978, 1979, 1980, and 1982
5. Public Rangeland Improvement Act, 1978

NEED

Maintain or improve resource conditions on public lands within the Escondido Project Area. Considered are the facts that:

1. Within the six Class I (improvement) allotments there are:
   - 15,000 acres rated suitable for grazing.
   - 15,000 acres rated potentially suitable for grazing.
   - 13,565 acres rated unsuitable for grazing.
2. Numerous sensitive plant species occur on the grazing allotments:

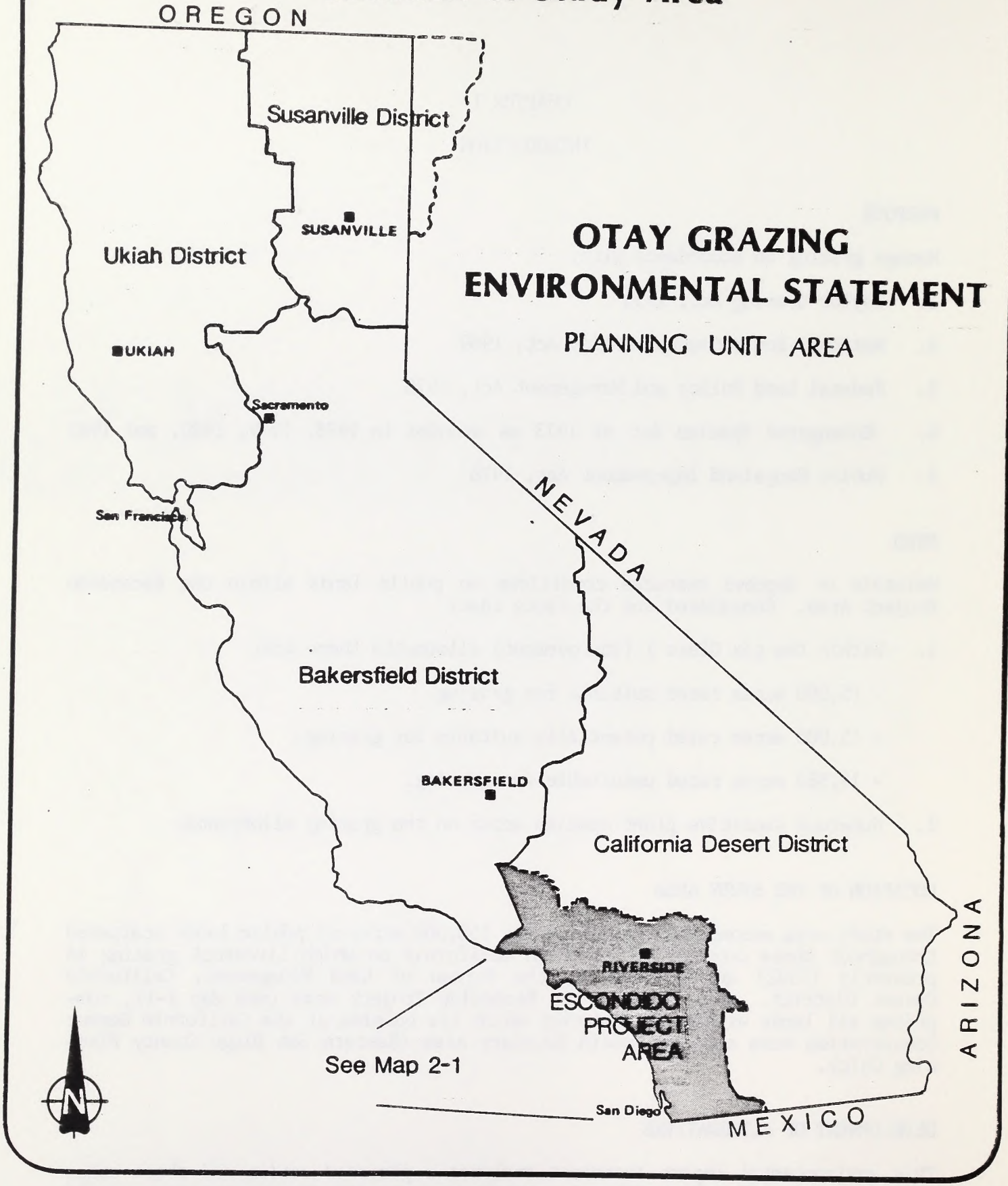
LOCATION OF THE STUDY AREA

The study area encompasses approximately 150,000 acres of public lands scattered throughout three counties in southern California on which livestock grazing is presently (1982) administered by the Bureau of Land Management, California Desert District. This region, the Escondido Project Area (see Map 1-1), comprises all lands within the District which lie outside of the California Desert Conservation Area and the McCain Boundary Area (Eastern San Diego County Planning Unit).

DEVELOPMENT OF ALTERNATIVES

This environmental impact statement analyzes a proposed action and three other grazing management alternatives. Alternative 1, the Proposed Action, would

MAP 1-1
Location of Study Area



continue present management. Within San Diego County, the direction established by the Management Framework Plan (MFP) prepared for the Escondido-Border planning unit in 1975 would be followed. Outside this area, management would conform to existing grazing leases. No amendment of the MFP would be required if this alternative is adopted.

Alternatives 2 and 3, Increased and Decreased Livestock Grazing respectively, were developed to allow assessment of a range of livestock grazing use. Alternative 4 (No Grazing) allows analysis of the elimination of livestock grazing on the public rangeland as a basis for comparison with the other management alternatives.

GENERAL LAND USE GOALS

1. Reduce hazardous fuel loads through prescribed burning.

2. Protect archaeological, historical, and wilderness resources as required by law.

3. Protect rare, threatened, and endangered plants.

MAJOR ISSUES

Four public meetings were held to identify significant issues concerning the Escondido Project. No issues involving livestock grazing were identified.

KEY TERMINOLOGY

Term	Definition
Allotment	Area of public land where one or more operators graze their livestock. May include parcels of private or state land. Number of livestock and period of use stipulated. Contains one or more pastures.
Allotment Management Plan (AMP)	Allotment-specific grazing management plan specifying livestock numbers, seasons of use, grazing system and needed range improvements.
Animal Unit Month (AUM)	Amount of feed or forage required by one cow for one month (approximately 800 lbs/month).
Carrying Capacity	Maximum stocking rate possible without damaging vegetation or related resources.
Competitive Forage	Forage being utilized by more than one grazing animal at one time.
Grazing System	Prescribed systematic sequence of grazing use and non-use of allotment.
Range Condition	Present state of vegetation in relation to the climax (natural potential) plant community for that site.
Utilization	Percent of annual weight of plant removed by grazing animals.

CHAPTER 2
ALTERNATIVES

CHAPTER 2

ALTERNATIVES INCLUDING THE PROPOSED ACTION

INTRODUCTION

This chapter includes:

1. A tabular description of four alternative grazing management plans, including the proposed action;
2. Objectives of the alternatives;
3. Grazing use levels and proposed range developments by alternative;
4. A comparative summary of grazing impacts.

Alternatives Considered

1. Proposed Action (continue present management)
2. Increased Livestock Grazing
3. Decreased Grazing
4. No Grazing

Alternative Objectives

1. Proposed Action - Manage for the production of AUMs within the constraints of multiple use.
2. Increased Livestock Grazing - Manage to maximize AUMs under the principles of sustained yield.
3. Decreased Grazing - Phase out small, isolated allotments.
4. No Grazing - Eliminate grazing.

SELECTIVE MANAGEMENT CATEGORIES

Included in Alternatives 1, 2, and 3 is a classification of allotments into "Selective Management Categories." This approach is based upon a central concept that:

(1) grazing allotments can be grouped into three resource management categories according to renewable resource, social, economic, and management criteria;

(2) the intensity of grazing management can be formulated based on the level of resource management needed for allotments within each category; and

(3) the grouping of grazing allotments between and within categories can establish a priority ranking of the investment of public funds and management efforts.

Allotments sharing similar characteristics were grouped into one of three management categories (Category "I" for improved, Category "M" for maintain, and Category "C" for custodial).

In June 1982, all allotments within the California Desert District were categorized into these three classifications. All grazing allotments within the Otay Grazing EIS boundaries were placed in the custodial management category because most fit the custodial category characteristics and because there was reduced emphasis on intensive management before completion of the Otay Grazing EIS.

Six of the allotments were reclassified into Category I due to the need for proper range improvement management which has been delayed for seven years. Most of these allotments have had water development, fence, and/or brush control projects planned, but whose implementation has been delayed until the completion of this Grazing EIS. These projects would normally have been completed as request were received.

The 22 custodial allotments are small and have low stocking levels. Most are on scattered public land parcels interspersed with private land. Most of these allotments are combined with the private holdings to form a operation.

The resource and management characteristics of allotments within each category are as follows:

Category I Characteristics

- Principal objective - to improve resource conditions.
- Current management inadequate and can be improved.
- Vegetation production below potential with opportunity to increase.
- Resource conflcits and concerns evident.
- High potential for positive economic return.
- Size relatively large.
- Land status displays significantly well blocked public lands.

Category M Characteristics

- Principal objective - to maintain or improve the existing situation.
- Current management acceptable or may require minor adjustments.
- Vegetation production at or near potential.
- Limited or no resource conflicts.
- Possible limited positive economic return.
- Size and land status variable.

Category C Characteristics

- Principal objective - to prevent deterioration of conditions.
- Vegetation production low with limited potential to increase.
- Resource conflicts and concerns limited.
- Little potential for positive economic return.
- Size relatively small.
- Land status variable, but generally contains significant private lands.

DESCRIPTION OF ALTERNATIVES

Introduction

The BLM and the US Forest Service are currently negotiating a transfer of land administration within the Escondido Project Area (Otay Grazing EIS Area). This transfer would place administration of BLM lands adjacent to National Forests under the US Forest Service.

The alternatives have been developed with the concurrence of the Forest Service. Those lands that the Forest Service would acquire would be administered according to their regulations and policies. This document would be used by the Forest Service as a general guide to future administration of these lands.

Range improvements discussed in the alternatives are based on estimated improvement needs. These estimates were determined by BLM staff from personal communications with livestock operators and general knowledge of the allotments discussed in the EIS area.

Alternative 1 - Proposed Action

This alternative continues the present management situation. Monitoring studies would be established by allotment management plans.

Under this alternative, 4378 AUMs would be allocated to livestock in 28 allotments. Total acres grazed would remain 55,370.

Six allotments involving 41,113 acres are proposed for improved management under the selective management system (See Table 2-1). The remaining 22 allotments would be managed under the custodial category.

Range improvements and vegetation treatments would be necessary to improve management of I category allotments. Improved grazing management would provide better livestock control and distribution of grazing pressure. Range improvements would include fences, cattleguards, and spring developments. Vegetation treatment would consist of prescribed burning of dense chaparral shrubs.

Table 2-3 presents the number of projects and acreages of prescribed burning needed to implement the proposed action. Site-specific environmental analyses (EAs) will be conducted prior to the actual construction or treatment phase.

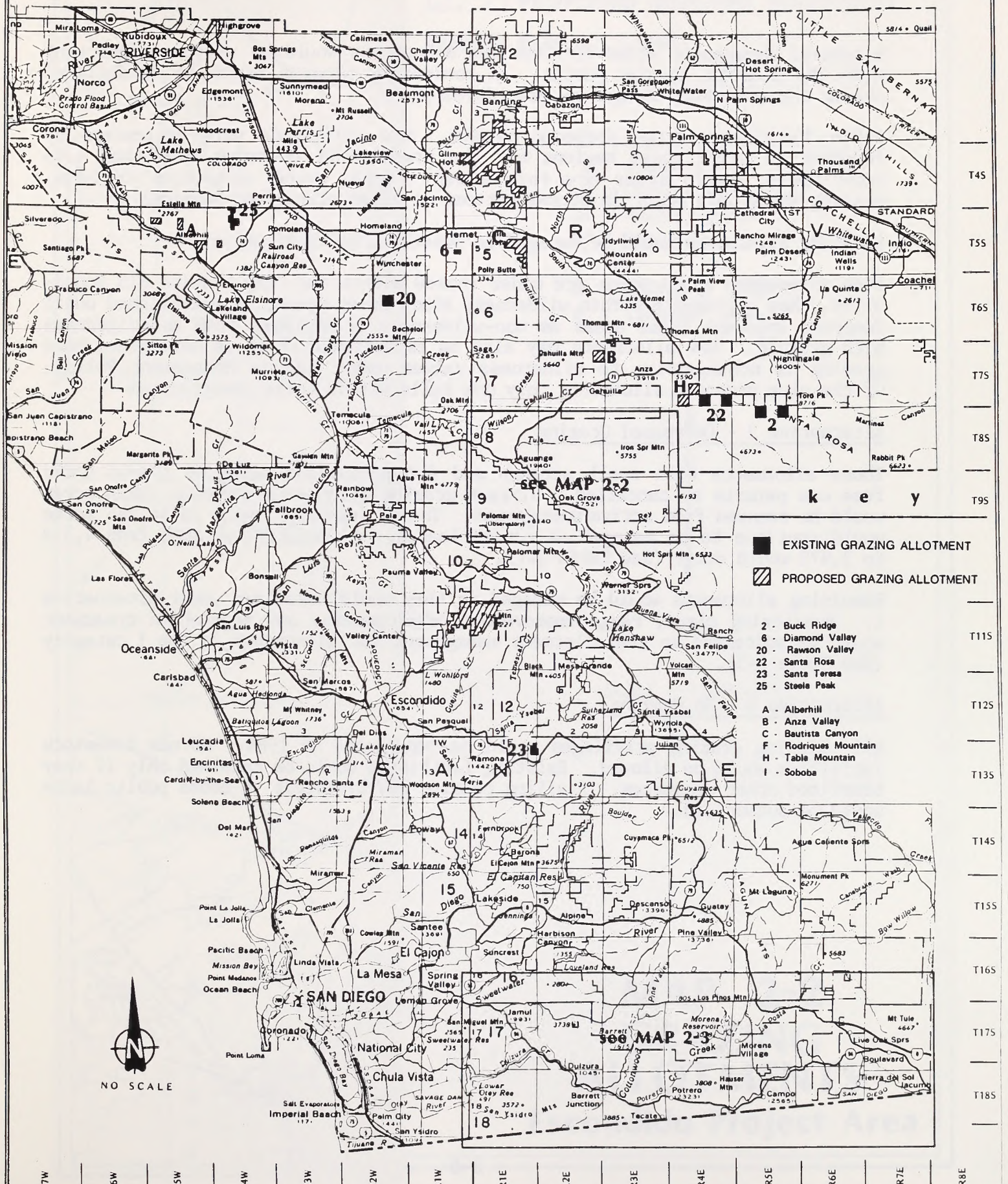
Alternative 2 - Increased Livestock Grazing

Forage would be consumed at current levels with adjustments made according to monitoring results. Nine new grazing allotments would be established. It is estimated that a potential 1470 AUMs increase in production is possible prior to prescribed burning (See Table 2-1).

MAP 2-1

GRAZING ALLOTMENTS

Escondido Project Area



Allotment management plans for the new allotments would be written concurrent with the leasing to the public. A monitoring program would be established during the allotment management plan development.

Table 2-4 presents the projects needed. New allotments were determined by requests to graze these regions and the presence of no major conflicts. In some cases, these areas are very steep, rocky, heavy chaparral regions. Grazing would only occur in stream bottoms or after prescribed burning.

Existing allotments would be managed as described by alternative 1.

Five wilderness study areas are under review within the Otay Grazing EIS Boundaries. New allotments within wilderness study areas cannot be established until Congress approves these areas as non-wilderness or approves them as wilderness with grazing. New allotments may also be established if it is determined that grazing is nonimpairing to wilderness values under Interim Management Policy. Of the nine proposed allotments only one falls within these constraints.

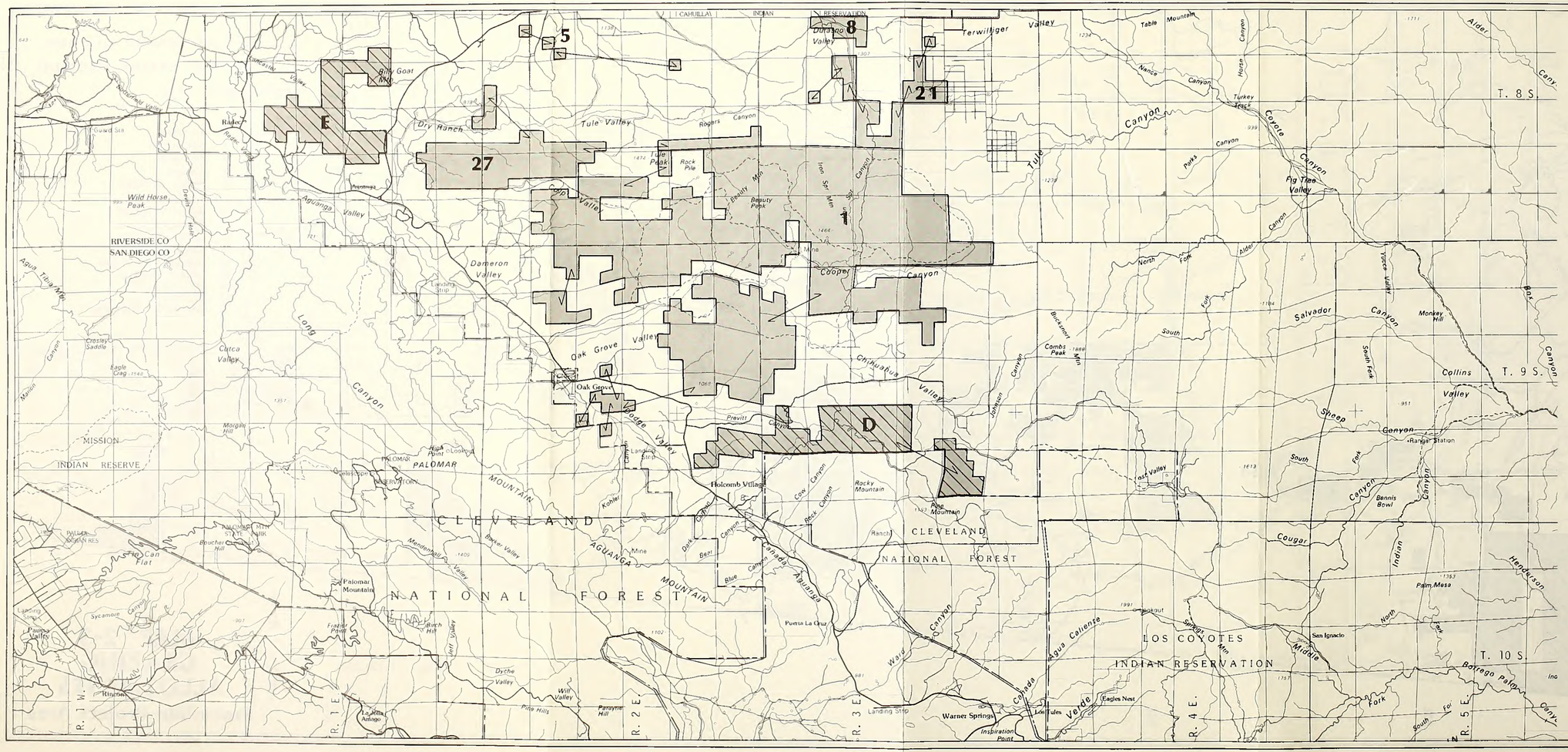
Alternative 3 - Decreased Grazing

Those allotments with small acreage and AUM production would be placed under free use permits or cancelled. Sixteen grazing allotments covering 4,624 acres would be removed from active management. The 12 remainng leases on 44,746 acres would continue to be managed as active leases. A reduction of AUMs from 4,378 to 3,972 would occur (See Table 2-1).

Remaining allotments would be managed as they would have been under Alternative 1. Monitoring plans, range improvement developments, and vegetation treatment would be addressed in the allotment management for allotments in the I category (See Table 2-5).

Alternative 4 - No Grazing

All existing grazing privileges would be terminated by 1986. No new livestock facilities would be allowed. Existing facilities would be retained only if they benefited other resources. Trailing permits for livestock to cross public lands would be authorized.



EXISTING GRAZING ALLOTMENT

PROPOSED GRAZING ALLOTMENT

PUBLIC LAND

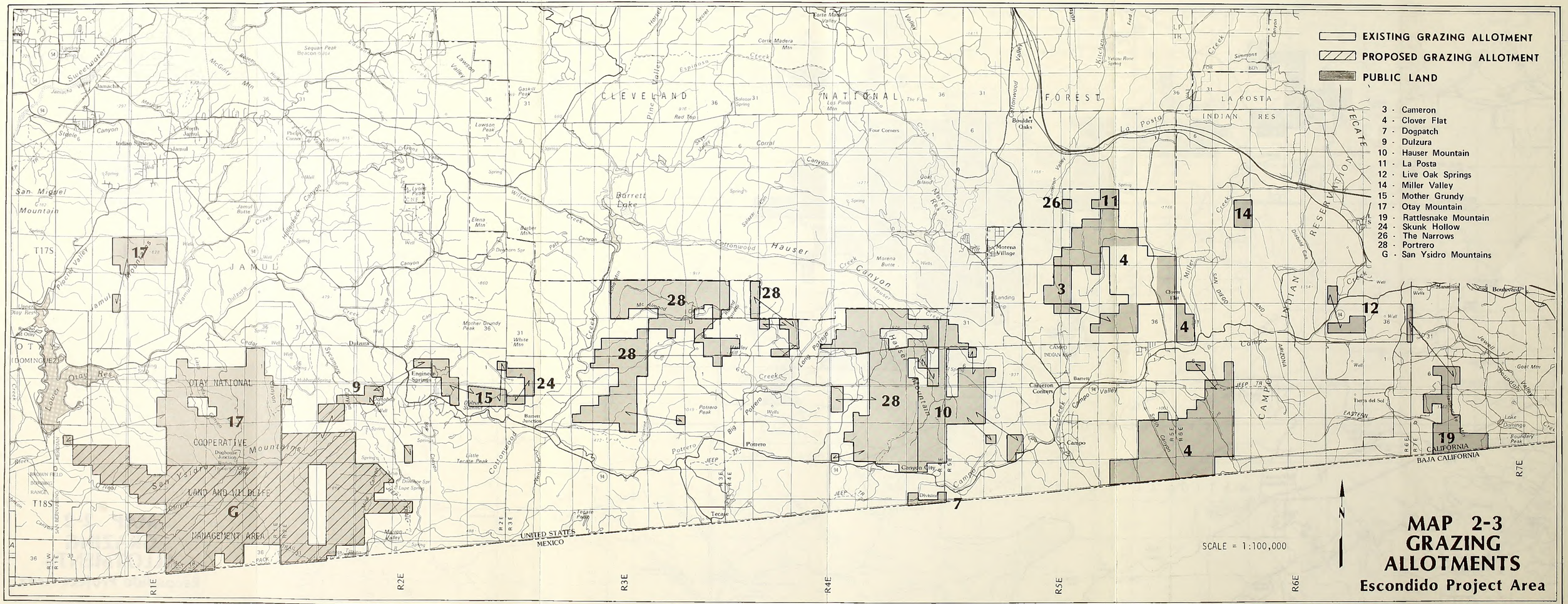
1 - Beauty Mountain
5 - Coahuilla
8 - Durasna Valley
21 - Rogers Canyon
27 - Tule Valley

D - Chihuahua Valley
E - Lancaster Valley

N

SCALE = 1:100,000

MAP 2-2
GRAZING ALLOTMENTS
Escondido Project Area



MAP 2-3
GRAZING ALLOTMENTS
Escondido Project Area

TABLE 2-1
FORAGE ALLOCATIONS

County	Allotment Name	Allotment Number	Acres	Selective Management Category	Number and Class of Livestock	Season of Use*	Existing Use AUMs	Allocation by Alternative			
								Alt. I Proposed	Alt. II Grazing Increased	Alt. III Grazing Decreased	Alt. IV No Grazing
Riv	Beauty Mtn	6009	17,413	I	121C	S.L.	1452	1452	1452	1452	0
Riv	Buck Ridge	6038	1,280	C	8C	S.L.	96	96	96	96	0
SD	Cameron	7005	. 400	C	10C	3/1-6/12	34	34	34	0	0
SD	Clover Flat	7012	7,522	I	350C	S.L.	715	715	715	715	0
Riv	Cahuilla	6007	156	C	2C	S.L.	23	23	23	0	0
Riv	Diamond Valley	6032	120	C	5C	3/1-6/30	20	20	20	0	0
SD	Dogpatch	7016	150	C	3C	3/1-7/31	15	15	15	0	0
Riv	Durasna Valley	6026	273	C	2C	S.L.	24	24	24	0	0
SD	Dulzura	7039	400	C	5C	1/1-8/31	40	40	40	0	0
SD	Hauser Mtn	7024	2,952	I	11C	12/16-6/15	66	66	66	66	0
SD	La Posta	7006	200	C	21C	7/16/12/7	23	23	23	0	0
SD	Live Oak Spgs	7011	307	C	5C	2/1-8/6	31	31	31	0	0
LA	Loma Verde Mtn	0101	120	C	3C	S.L.	17	17	17	0	0
SD	Miller Valley	7017	240	C	8C	9/15-1/14	32	32	32	0	0
SD	Mother Grundy	7041	720	C	6C	S.L.	72	72	72	72	0
LA	Mt. McDill	0092	229	C	3C	S.L.	36	36	36	0	0
SD	Otay Mtn	7035	5,522	I	74C	2/1-4/30	222	222	222	222	0
LA	Quail Lake	0091	80	C	2C	S.L.	16	16	16	0	0
SD	Potrero	7046	8,594	I	61C	S.L.	726	726	726	726	0
SD	Rattlesnake Mtn	7030	1,174	C	10C	S.L.	118	118	118	118	0
Riv	Rawson Valley	6003	725	C	24C	S.L.	99	99	99	99	0
Riv	Rogers Canyon	6042	1,202	C	34C	S.L.	102	102	102	102	0
Riv	Santa Rosa	6036	1,280	C	5C	S.L.	32	32	32	0	0
SD	Santa Teresa	7021	361	C	6C	3/1-9/5	37	37	37	0	0
SD	Skunk Hollow	7029	273	C	4C	3/1-7/31	20	20	20	0	0
Riv	Steele Peak	6040	1,580	C	660S	3/15-6/14	132	132	132	132	0
SD	The Narrows	7001	35	C	1	S.L.	6	6	6	0	0
Riv	Tule Valley	6027	2,062	I	14C	S.L.	172	172	172	172	0
Riv	Alberhill	--	1,160	I	--	--	0	0	100	0	0
Riv	Anza Valley	--	1,090	I	--	--	0	0	100	0	0
Riv	Bautista Canyon	--	2,730	I	--	--	0	0	120	0	0
SD	Chihuahua Valley	--	3,040	I	--	--	0	0	200	0	0
Riv	Lancaster Valley	--	2,106	I	--	--	0	0	200	0	0
SD	Rodriques Mtn.	--	2,960	I	--	--	0	0	250	0	0
SD	San Ysidro Mtns.	--	10,684	I	--	--	0	0	200	0	0
Riv	Soboba	--	10,282	I	--	--	0	0	200	0	0
Riv	Table Mtn.	--	1,360	I	--	--	0	0	100	0	0
	Totals		90,692	15 I 22 C	798C 660S		4378	4378	5848	3972	0

*To be determined by AMPs for new allotment

SPECIFICATIONS FOR RANGE DEVELOPMENTS

Water Troughs
18 ft. circular ring with concrete base
or
3 ft. x 12 ft. metal or concrete trough

All troughs have wildlife escape ramps
Disturbance = .2 acres per trough

Fences
Install per BLM specifications
Disturbance = 1 acre per mile

Springs
Excavate spring source
Install 3' x 3' metal headbox
Pipe water to trough
Leave water at source for wildlife
Pipe overflow into original drainage
Fence meadow complex
Disturbance = .2 acres ech

Reservoirs
Reservoirs
Excavate and place dike
Provide spillway
Size = 1-2 acres or less
Acre capacity = 8 ac/ft
Disturbance = 5 acres per reservoir

Vegetation Treatment
Burn plans will establish specifications and prescriptions

TABLE 2-2

DEVELOPMENT AND MAINTENANCE COSTS

Alternative 1

ITEM	QUANTITY	ESTIMATED UNIT COSTS	TOTAL	ESTIMATED MAINTENANCE COSTS*	ESTIMATED LIFE OF PROJECTS (YEARS)
FENCES	5 miles	2000/mile	10000	500	20+
SPRING DEVELOPMENTS	8	1000	8000	1000	20+
CATTLE GUARDS	3	3000	6000	0	20+
WATER TROUGHTS	8	200	1600	0	20+
EARTHEN RESERVOIRS	2	1-4,000	5000	600	20+
PRESCRIBED BURNS	5,000 acres	$4/acre	20000	0	10+
TOTAL			50600	2100	

* - Maintenance cost will be assumed by operator benefited by project.

TABLE 2-3

DEVELOPMENT AND MAINTENANCE COSTS

Alternative 2

ITEM	QUANTITY	ESTIMATED UNIT COSTS	TOTAL	ESTIMATED MAINTENANCE COSTS*	ESTIMATED LIFE OF PROJECTS (YEARS)
FENCES	35 miles	2000/mile	70000	3000	20+
SPRING DEVELOPMENTS	20	1000	20000	2300	20+
CATTLE GUARDS	8	3000	24000	0	20+
WATER TROUGHTS	25	200	5000	0	20+
EARTHEN RESERVOIRS	4	1-4,000	10000	1200	20+
PRESCRIBED BURNS	20000 acres	$4/acre	80000	0	10+
TOTAL			209000	6500	

* - Maintenance cost will be assumed by operator benefited by project.

TABLE 2-4

DEVELOPMENT AND MAINTENANCE COSTS

Alternative 3

ITEM	QUANTITY	ESTIMATED UNIT COSTS	TOTAL	ESTIMATED MAINTENANCE COSTS*	ESTIMATED LIFE OF PROJECTS (YEARS)
FENCES	5 miles	2000/mile	10000	500	20+
SPRING DEVELOPMENTS	8	1000	8000	1000	20+
CATTLE GUARDS	2	3000	6000	0	20+
WATER TROUGHS	8	200	1600	0	20+
EARTHEN RESERVOIRS	2	1-4,000	5000	600	20+
PRESCRIBED BURNS	5,000 acres	$4/acre	20000	0	10+
TOTAL			50600	2100	

* - Maintenance cost will be assumed by operator benefited by project.

STANDARD OPERATING PROCEDURES

Pre-Range Project Development:

1. Cultural resources will be inventoried within the potential area of project impact in accordance with the stipulations of the Rangeland Programmatic Memorandum of Agreement (RPMOA) between the Advisory Council on Historic Preservation, BLM, and the National Conference of State Historic Preservation Officers (dated January 14, 1980). Local Native Americans will be consulted.

   Projects will be planned to avoid cultural resource sites where possible. Where avoidance is not possible, procedures developed in the RPMOA will be followed, and consultation with local Native Americans will be made.

2. Projects proposed in the vicinity of habitat for federally listed endangered or threatened plant or wildlife species will be analyzed for effect of that project on the species. If there is no effect, or the effect can be avoided (e.g., relocation), then the project can proceed. If it is determined that an unavoidable effect on the species will occur from project construction, formal consultation with the US Fish and Wildlife Service (FWS) will be initiated as required under Section 7 of the Endangered Species Act of 1973.

3. It is BLM policy not to implement any project that will jeopardize the continued existence of plant or wildlife species listed by the California Department of Fish and Game, or plant species that are candidates for threatened or endangered status (FWS listed).

4. A visual resource contrast rating will be conducted for all construction sites (BLM Visual Resource Policy Manual 8400). Projects that would impair visual resources will be modified by design, relocation, or abandonment if necessary to comply with visual resource objectives.

5. Wilderness Study Areas will be regulated so as not to impair the suitability of these areas for preservation as wilderness. Management of these areas will be in accordance with the Interim Management Policy and Guidelines for Lands Under Wilderness Review (IMP) (December 12, 1979).

6. Grazing mangement activity will comply with the Clean Air Act (as amended, 1977) and public lands in the EIS area will be managed under the Class II designation. Lands under wilderness review will also be manged under Class II, as set forth in the IMP.

7. Prescribed burning will be planned for specific goals and objectives.

8. Water quality concerns will be considered in the planning of projects and management plans.

9. The California Department of Fish and Game will be consulted early, for their input into the development of specific burn plans.

Project Design Restrictions:

1. Location of existing and proposed livestock watering and handling facilities will not be placed within one-quarter mile of riparian zones and sites that are highly susceptible to soil erosion.

2. Fences willnot be located on sites that are highly susceptible to soil erosion.

3. Natural barriers will be considered for providing livestock movement control where possible to reduce the amount of fence construction.

4. No clearing of vegetation for fence construction and maintenance will be done except where absolutely necessary.

5. All material used for developments will be of a blending color harmonius to the surrounding background.

6. All existing and proposed livestock watering facilities will be designed to adequately facilitate wildlife water needs.

7. Removal of vegetation and surface disturbances will be minimized for development of facilities, and surface rehabilitation measures will be applied where feasible.

8. Spring sources that are susceptible to damage from livestock trampling will be fenced.

9. Prescribed burns will be planned under prescribed constraints that will assure minimum damage to plant cover and soil.

10. Prescribed burns will be implemented only after an approved burn plan has been developed.

11. Prescribed burns for increasing forage production will be carried out only on potentially suitable sites.

12. Burns for improving wildlife habitat will be accomplished on potentially suitable and unsuitable sites for livestock.

13. All surface disturbing activities/projects will be placed at least one-quarter mile from populations of sensitive plant species. A field check for all potential sensitive species will be done in the appropriate flowering season for each project, where applicable.

14. Prescribed burning shall take place only on days designated as a "burn day" by the California Air Resources Board.

MONITORING PROGRAMS

Adjustments of grazing management would be based on results obtained from the monitoring evaluations. Monitoring programs would be initiated during the second phase of implementation.

Monitoring intensity would be variable depending upon allotment management category, special resource needs, and funding constraints. Generally, monitoring intensity would be moderate to high on Improvement Allotments and low on Custodial Allotments.

Details of the monitoring program, including priorities and frequency, will be outlined in a monitorin plan to be developed after final grazing program decisions are made.

IMPLEMENTATION

Implementation will be phased in as follows:

1. Consultation with grazing operators.

2. Develop AMPs utilizing existing projects, monitoring programs.

3. Develop AMPs utilizing new projects, projects needed for resource protection.

The allocation levels proposed in Alternative 1 (proposed action) will be maintained under the preferred alternative to meet the multiple use and sustained-yield objective. The Area Manager will have the authority to issue a new decision to adjust allocation based on monitoring information.

TABLE 2-5
ALTERNATIVE AND IMPACT SUMMARY

Major Actions	Existing Situation	Proposed Action	Livestock Increased	Decreased Livestock Grazing	No Grazing
ALLOTMENT CATEGORIES					
Intensive Allotments	0	6	15	6	--
Custodial Allotments	28	22	22	6	--
FORAGE ALLOCATIONS (AUMs)					
Livestock	4378	4378	5848	3972	0
RANGE IMPROVEMENTS NEEDED					
Fences (miles)	5	5	35	5	0
Springs	8	8	20	8	0
Reservoirs	2	2	4	2	0
Prescribe burn (acres)	5,000	5,000	20,000	5,000	0
Impacted Resource					
AUM Increase after burning	0	770	2,620	770	0
RARE PLANTS					
No. Highly Susceptible to Impact From:					
- Grazing	7	7	9	7	0
- Fire	0	9	12	9	0
SOCIO-ECONOMIC					
No. operators substantially impacted (Class I Allotments) (+/-)	0	+2	+2	+2	-3

CHAPTER 3
AFFECTED ENVIRONMENT

CHAPTER 3
AFFECTED ENVIRONMENT

CHAPTER 3

AFFECTED ENVIRONMENT

INTRODUCTION

This chapter provides ---

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1. A description of the existing environment which will serve as a baseline for comparison with impacts projected in Chapter 4.

2. A description of only those components of the environment likely to be affected by implementation of the alternatives.

3. No consideration of those components not likely to be significantly impacted.

Environmental Components described include ---

1. Soils
2. Vegetation
3. Wildlife
4. Cultural Resources
5. Wilderness
6. Socio-Economics

SOILS

Various soils are found within each of the allotments. However, the range of soil properties is generally similar for each allotment. Most of the soils are well drained and sandy (most soil textures are loamy sands or sand loams) with slopes ranging from gentle to steep. The soil properties which will cause the soils to be most susceptible to impacts from the proposed action include steepness of slope and potential for increased water repellency after burning. Both of these factors will increase runoff and water erosion after prescribed burning. Sandy soils, which are commonly found throughout all the allotments, have the highest potential for water repellency and the "I" category allotmens with the steepest terrain are Otay Mountain and Beauty Mountain. The proposed new allotments which are steepest and have the greatest potential for accelerated erosion after burning include Lancaster Valley, Rodriquez Mountain, and San Ysidro Mountain.

VEGETATION

Vegetation Types

Vegetation typs found throughout the Escondido Resource Area as described by Chetham and Haller, December 1976 ("An Annotated List of California Habitat Types"). Also consulted was "Terrestial Vegetation of California " by Barbour & Major, 1977.

Chaparral

The major type in this area is the South Coast Mixed chaparral. The major plant species which occur are chamise, manzanita, hoary-leaf ceanothus, mountain mahogany, toyon, California scrub oak, California buckwheat laurel sumac, sage, yucca, and a number of fire response annual species. This type grades into the more inland California Mixed Chaparral which is found up to 5000 feet elevation.

Red Shank Chaparral, another major vegetation type found in this area, is similar to mixed chaparral. It occurs at higher elevation and is found mostly on granitic soils. The major plant species found in this type is red shank, occasionally as pure stands. This type is found inland with higher rainfall and cooler winter temperatures.

Grasslands

Cismontane Valley and Foothill Grasslands are occasionally found to 4000 foot elevations on fine textured soils, usually water logged during the winter and very dry during the summer and fall. It is often intermixed with spring flowering annual forbs and grasses. Natives species have been replaced in many habitats by overgrazing and the invasion of weedy annual Mediterranean grasses.

Riparian Habitat

The Southern Mixed Riparian Woodland is usually found in a narrow band along streambanks. Its course is through gravelly or rocky soils. This type grades into the Southern Oak Woodlands. The major species are coast live oak, western sycamore, cottonwood, willow, many perennial and annual spring wildflowers, and annual grasses.

Woodlands

The Baja California Pinyon-Juniper Woodland is a very minor component of the area. It is found from 3500 to 5500 feet elevations. The major species found throughout this type are California juniper, parry pine, chamise, and red shank.

Closed-Cone Coniferous Forest

The Southern Interior Cypress Forest is only found in a very isolated area above 2000 feet on the Mexican border in San Diego County. It occurs on drier regions on granitic soils which intergrade with chaparral. Characteristic species are Tecate cypress, manzanita and ceanothus.

Relationships Between Vegetation Types And Grazing

Of the major vegetation types, the majority of livestock forage is found in the Mixed Riparian Woodlands. Secondary forage is obtained as browse in the South Coastal Mixed Chaparral and Red Shank Chaparral. The other vegetation types are minor components of grazed public lands within the EIS area.

The Mixed Riparian Woodlands are usually the most important vegetation type found in the larger Category I (improvement) allotments. Water and forage are usually consumed together in close proximity. Since these drainages are free of dense chaparral, access is easier. Many Mixed Riparian Woodlands that have been protected from fires for long periods have been overgrown by dense chaparral, and constitute potentially suitable grazing lands with prescribed burning.

Livestock herds that have been maintained within this region for long periods have adapted to the abundance of shrubs by becoming dependent on browsing. Browsing habit is learned from younger animals by observing adults. This results in some important useage of South Coastal Mixed Chaparral and Red Shank Chaparral.

Most of the Valley and Foothill Grassland type is found on adjacent private landholdings. This type is usually excellent forage for three to four months and plays an important part in the spring diet of livestock in this region.

Table 3-1 shows the important vegetation types within Category I allotments.

TABLE 3-1

VEGETATION TYPES WITHIN
CATEGORY I ALLOTMENTS

	Beauty Mountain	Clover Flat	Hauser Mountain	Otay Mountain	Potrero	Tule Valley
South Coastal Mixed Chaparral	X	X	X	X	X	X
Red Shank Chaparral						X
Valley and Foothill Grasslands	X	X		X		X
Southern Mixed Riparian Woodland	X				X	X
Pinyon-Juniper Woodland						
Southern Interior Cypress Forest				X		

Suitability for Livestock Grazing

Public land has been broken into three categories: suitable, potentially suitable, and unsuitable. Appendix A gives the specific criteria for these categories. Acres within each category for the six existing Category I (Improvement) allotments are listed in Table 3-2.

TABLE 3-2

ESTIMATED GRAZING SUITABILITY OF EXISTING CLASS I ALLOTMENTS

Allotment Name	Allotment Number	Suitable Acres	Potentially Suitable Acres	Unsuitable Acres	Total Acres
Beauty Mtn.	6009	5200	8000	4213	17,413
Clover Flat	7012	3500	2000	2022	7,522
Hauser Mtn.	7024	1000	500	1452	2,952
Otay Mtn.	7035	1500	2000	2022	5,522
Potrero	7046	3500	2000	3094	8,594
Tule Valley	6027	800	500	762	2,062
		15,500	15,000	13,565	44,065

Rare, Threatened, or Endangered Plants (RT&E)

Only one Federally-listed RT&E plant occurs within the study area. However, several species found within grazing allotments are presently under review by the Fish and Wildlife Service. Table 3-3 identifies species of concern, Federal and State listing, and California Native Plant Society REVD code. Appendix B defines the listings and explains the REVD code.

WILDLIFE

Listed Species

Bald Eagle

The Bald Eagle is included on both the Federal and State endangered species lists as an endangered species. The species is an uncomon winter visitor to lakes and reservoirs within the project area. Bald Eagles arrive in Southern California in November and remain through mid-March (Pyle 1961). None are known to breed or spend the summer on coastal lakes.

Bald Eagles are usually seen foraging for fish on large lakes or roosting in trees adjacent to these lakes. However, they are known to use surrounding mountains and valleys where they forage on carrion or small mammals caught live.

Least Bell's Vireo

The Least Bell's Vireo is listed by the State as an endangered species. It is found only in scattered riparian habitats in Southern California. Within its range, this species was formerly one of the most abundant songbirds (California Department of Fish and Game, 1980); today population estimates are less than 200 pairs. Population declines are attributed to the destruction and degradation of riparian habitat and parasitism by Brown-headed Cowbirds (Goldwasser et al 1980).

In the spring of 1978, Goldwasser (1978) reported on the survey of 29 potential breeding sites in San Diego County, 8 sites in Orange County, 12 sites in western Riverside County, and 13 sites in Los Angeles County. Of these 62 sites, only 24 had breeding pairs and only 5 (all in San Diego County) had more than three pairs. Most vireos were observed in willow thickets with a dense understory of shrub species such as willows or mule fat. The Least Bell's Vireo Draft Recovery Plan (Wilbur 1980) lists 34 extant breeding populations. None are listed for BLM-administered lands within the Project Area, but individual pairs may be found in isolated riparian sites.

TABLE 3-3

R, T, & E PLANTS OCCURRING ON OR WITHIN
ONE MILE OF OTAY GRAZING EIS ALLOTMENTS

Plants On
Existing Allotment

	TYPE OF LIST				
	CNPS	State*	US Fish & Wildlife Service		Perennial
	R-E-V-D	of Calif.	Listed	Candidate	or
Plant Name	CODE	List	Table/Category	Table/Category	Annual
Dudleya variegata	1222			3/1	P
Ferocactus viridescens	1221			3/1	P
Calamagrostis densa	2112			3/2	P
Arctostaphylos otayensis	2113			3/2	P
Brodiaea orcuttii	1222			3/1	P
Monardella hypoleuca ssp. lanata	2112			3/2	P
Calochortus dunnii	3212	R		3/1	P
Pogogyne nudiuscula	3332			3/1	A
Fremontodendron mexicanum	3332	R		3/1	P
Dichondra occidentalis	1221			4/3c	P
Eryngium aristulatum var. parishii	2332	E		3/1	B-P
Lepechinia ganderi	2112			3/2	P
Caulanthus stenocarpus	2212	R		3/2	P
Solanum tenuilobatum	2113			3/2	B-P
Brodiaea filifolia	3333	E		3/1	P
Pogogyne abramsii	3333	E	1/Ed**		A
Satureja chandleri	2212			3/1	P
Stipa diegoensis	3111			4/3c	P
Cupressus stephensonii	3213			3/1	P
Cupressus guadalupensis ssp. forbesii	1211			4/3c	P
Acanthomintha ilicifolia	3322	E		3/1	A
Ribes canthariforme	2113			3/2	P
Hemizonia floribunda	2212			3/1	A
Linanthus bellus	2111			4/3c	A
Nolina interrata	3223	E		3/1	P
Hemizonia conjugens	3322	E		3/1	A

* R=Rare, E=Endangered
** Within one mile of allotment

TABLE 3-3 (cont.)

PLANTS ON PROPOSED ALLOTMENTS

Plants on Proposed Allotments	TYPE OF LIST				
	CNPS		US Fish & Wildlife Service		Perennial
Plant Name	R-E-V-D CODE	State List	Listed Table/Category	Candidate Table/Category	or Annual
Bautista Canyon					
Galium californicum ssp. primum	3323			3/1	P
Rodriguez Mountain					
Linanthus orcuttii	3112			3/1	A
Delphinium hesperium var. cuyamacae	2213	R		3/1	P
Lancaster Valley					
Chaenactis parishii	2212			3/2	A
Penstemon californicus	2112			3/2	P
Linanthus orcuttii	3112			3/1	A
Monardella macrantha var. hallii	1113			3/2	P
Chihuahua Valley					
None					
Table Mountain					
Salvia eremostachya	1111			4/3c	P
Chaenactis parishii	2212			3/2	A
Anza Valley (within five miles)					
Penstemon californicus	2112			3/2	P
Chaenactis parishii	2212			3/2	A
Arabis johnstonii	3223			3/1	P
Layia ziegleri	2113			3/2	A
Alberhill					
None					

Stephen's Kangaroo Rat

Stephen's Kangaroo Rat is listed by the State as a rare species. Historically, Stephen's kangaroo rat was found in the San Jacinto Valley of Riverside County with small populations extending into San Bernardino and San Diego Counties. There have been extensive surveys by Thomas (undated) in 1972 and 1973 and by Hicks (1977) in 1975 and 1976. Surveys of specific sites have been conducted by BLM and Southern California Edison Company (Pearson, pers. comm.).

Declines in populations have been attributed to loss of habitat due to agricultural development and reservoir construction. Residential development on the remaining non-arable lands pose a serious threat to remaining habitat. The current known distribution relative to the grazing allotments is shown on Map 3-1.

Game Species

Mule Deer

Mule deer are found throughout the project area and use most of the allotments. There are no population or density estimates for the proposed grazing allotments, and hunter take is also unknown. Annual hunter take for the coastal portion of San Diego County is about 300 bucks per year (McKinnie, CDFG, pers. comm.) and for western Riverside County about 125 bucks per year (Paulek, CDFG, pers. comm.). Since most of this take is from San Bernardino National Forest, Cleveland National Forest and private lands, the actual take from BLM-administered lands in the project area is probably less than 10 per year. Preferred browse within the project area includes mountain mahogany, ceanothus, and tree poppy. Forbs and grasses are important during fawning season.

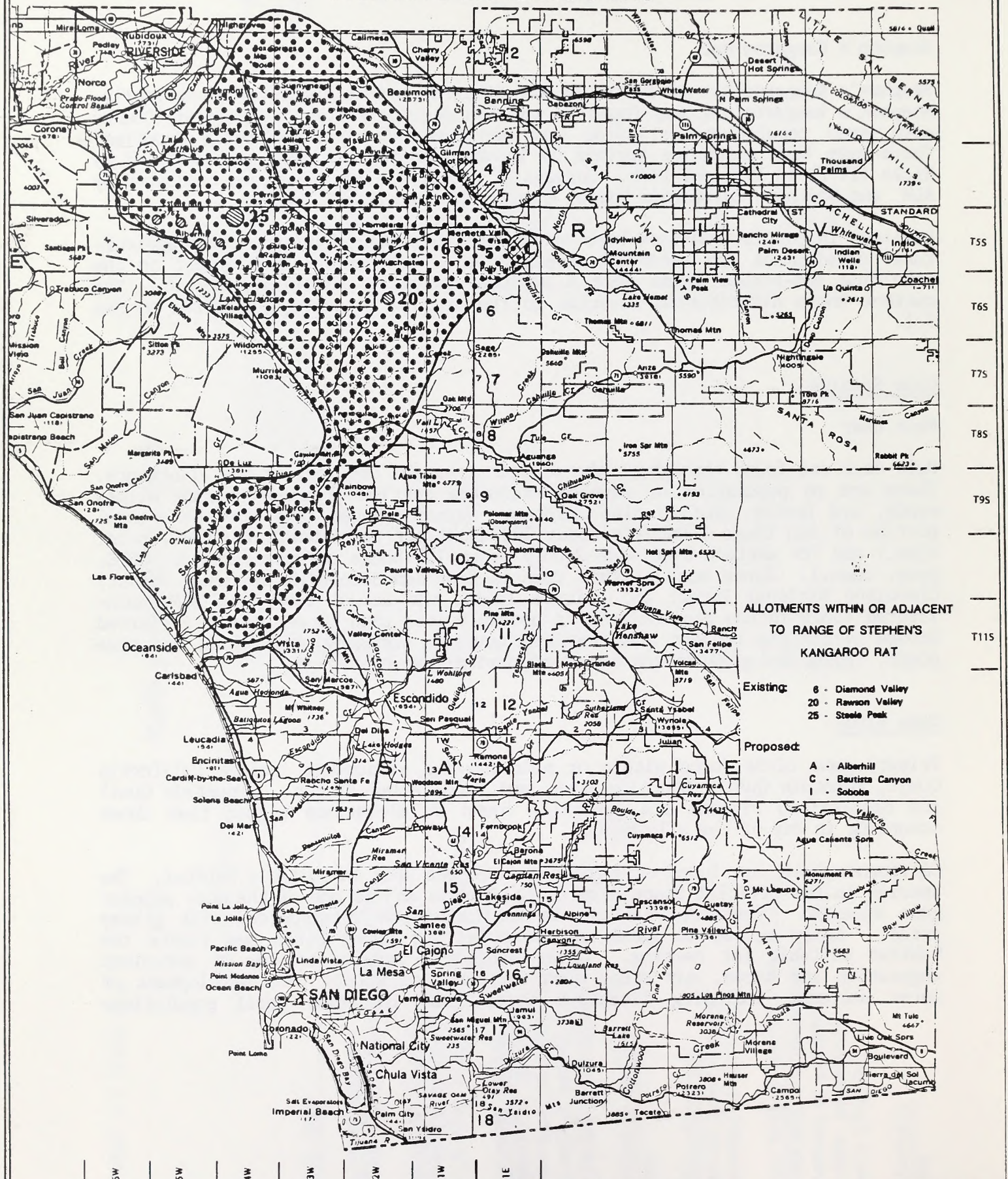
Game Birds

Primary game birds found within or near grazing allotments include California Quail, Mountain Quail, Mourning Dove, and Band-tailed Pigeon . Mountain Quail and Band-tailed Pigeons are generally found at elevations higher than those occurring in any of the allotments.

California Quail are found throughout the project area in suitable habitat. The species is the official State Bird of California and is one of the most popular game species. Preferred habitat is woodland-brush interspersed with grassy areas. Daily access to water is essential for young birds and limits the habitat suitable for nesting. Older birds can survive on dew or succulent vegetation and hence, may stray much further from water. The development of water soruces, including livestock water, has increased quail populations

MAP 3-1

RANGE OF STEPHEN'S KANGAROO RAT



in many areas. Important foods in the project area include seeds of filaree, turkey mullein, and fiddleneck. Important green plants eaten include clover, lupine, and trefoil (Malette 1969).

Mourning Doves may be found in all habitats and areas within the project area except the highest forests. Preferred habitat includes open woodland, grasslands, and agricultural and urban areas. Doves feed primarily on weed seeds and waste grain. The hunting take of Mourning Doves is unsurpassed by any other game species.

Non-Game Wildlife

There are about 25 fish species found within the project area (Moyle 1976). All but five species have been introduced. Most are associated with reservoirs and will not be affected by grazing, except that the proposed livestock reservoirs may provide new habitat.

Reptiles of interest include those forms found primarily in the Peninsular Ranges extending northward out of Baja California. These forms are noteworthy in that their entire distribution within the United States lies within the project area.

Songbirds reach their greatest densities and have the highest number of species in riparian habitats. This habitat type is especially suscpetible to alteration by grazing. The Least Bell's Vireo, addressed earlier, is one of these. Raptors, including Black-shouldered Kites (formerly known as the White-tailed kite) Red-shouldered Hawks and Golden Eagles nest within the project area. Grazing has a potential effect on the prey base (especially rodents and rabbits) of the raptors.

Significant non-game mammals include mountain lions and coyotes. Grazing may change rodent and rabbit prey availablity.

CULTURAL RESOURCES

Over 25,000 sites are recorded in the project area; however, it is estimated that less than 100 sites are recorded on public parcels. This is due to a lack of field investigations on the allotments. At least 1000 sites should be located on the allotments. Since a number of the parcels are steep and boulder covered, the majority of the site types expected to be found would be milling features, cache sites, and camp sites near water sources. Some military and mining sites exist throughout the public lands.

No known National Register sites are located on the public lands within the project area. Tecate Peak (Kuchaama) has been nominated due to its high Native American sacred value.

Access to public lands in general and access to specific areas could be a matter of concern to some Native groups in the project area. The protection of burial grounds is of utmost concern to the Indian community as was confirmed by BLM and industry ethnography (Laidlaw:notes; Woods 1981).

WILDERNESS

Section 603 of the Federal Land Policy and Management Act of 1976 directs the Secretary of the Interior and the Bureau to review all public land roadless areas of 5,000 acres or more and roadless islands having wilderness characteristics; determine their suitability or non-suitability for wilderness designation; and report the suitability recommendations to the President no later than October 21, 1991. The President must then report his final recommendations to Congress within two years and Congress will decide if any areas become wilderness or not.

The five areas listed below are designated Wilderness Study Areas (WSAs) and are being managed under the Interim Management guidelines so as not to impair their suitability for preservation as wilderness. Of these five, only one has been recommended as suitable for wilderness designation.

Agua Tibia WSA

Located in southwestern Riverside County, its 360 acres of public land are adjacent to 15,934 acres of US Forest Service Wilderness. This is the only WSA that BLM is recommending as wilderness to the President. No livestock grazing is associated with this WSA.

Beauty Mountain WSA

This is located on the southwestern Riverside County and northeastern San Diego County boundary. There are 11,342 acres of public land surrounding 1,405 acres of private land. This WSA was not recommended suitable for wilderness designation by the BLM. The Beauty Mountain grazing allotment encompasses most of this WSA.

Hauser Mountain WSA

The WSA is located in southeastern San Diego County on 5,489 acres of public land. It includes the Hauser Mountain and Potrero grazing allotments. This WSA was not recommended as suitable for wilderness designation.

Western Otay Mountain WSA

It is located in southern San Diego County within one mile of US-Mexican border. 5,751 acres of public land surround 160 acres of private land. The Otay Mountain grazing lease is located on the northern half of this WSA. The WSA was not recommended as suitable for wilderness designation.

Southern Otay Mountain WSA

Located in southern San Diego County, it is adjacent to Western Otay Mountain WSA. It is contiguous with the US-Mexican border. Public land constitutes 7,941 acres, which surrounds 640 acres of private land. Only a small northern portion of this WSA is within the Otay Mountain grazing lease. This WSA was not recommended as suitable for wilderness designation.

SOCIO-ECONOMICS

The lessees fall into two general groups: operators whose major source of income is livestock and part-time operators. The latter group include operators possessing other agricultural enterprises upon which their income is primarily dependent, as well as others, primarily among the smaller operators, who collectively depend on a variety of income sources.

Several types of livestock operations occur on the 22 custodial (Class C) and 6 improvement (Class I) allotments. These include one 660 head sheep operation (three months), thirteen year-long cow/calf, and four seasonal cow/calf operations; and three year-long and seven seasonal steer operations. Sixteen operations are yearlong, of which ten have no more than 10 cows. Twelve are seasonal operations, of which seven run 11 head or less. The 22 Class C allotments are used by 167 cattle and the 660 head sheep operation. The six Class I allotments are used by 631 cattle. There has been no official ephemeral grazing authorization in the past, although ephemeral forage is important to the yearly authorization. Acres grazed within the project area on and off public land are listed in Table 3-4. An analysis of herd size and dependence on BLM for forage for the operators of Class I allotments is presented by Table 3-5.

TABLE 3-4
Estimated Acres Grazed

	County Total	Escondido Project Area Total	Public Land
Riverside County	193,000	149,000	26,091
San Diego County	306,000	233,000	22,850
Los Angeles County	421,000	121,000	529
TOTAL	920,000	503,000	49,370

TABLE 3-5
Herd Size and Dependency of Operations
on BLM Forage
(Class I Allotments)

	CATTLE OPERATORS		
	Small	Medium	Large
Number of Operators	2	2	2
Average Herd Size	20	170	1092
Average % Dependency*	99	37	4
Total AUMs obtained from Escondido Project Area Allotments	240	1518	937

Operators: Small = 0-100 head; Medium = 100-400 head; Large = 400+

*Percent of Total Annual Forage Requirement Obtained from BLM

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter provides . . .

1. Scientific and analytic basis for the comparison of alternatives.
2. Mitigating measures.
3. Unavoidable adverse impacts.

The analysis of alternatives is organized by resource:

1. Soils
2. Vegetation
3. Wildlife
4. Cultural Resources
5. Wilderness
6. Socio-Economics

Based on the following assumptions:

1. Near-normal annual precipitation
2. Funds and personnel available for implementation
3. Impacts will be monitored and adjusted as necessary
4. Minor adjustments in management may occur
5. Short-term refers to five years, long-term to twenty years
6. Baseline data accurate

ALTERNATIVE 1:
PROPOSED ACTION

Soils

Many soils would have increased water repellency after prescribed burning. The loss of cover and increased water repellency would make the soil susceptible to increased runoff and water erosion. The greatest potential for accelerated water erosion would occur in steeper areas. The Otay and Beauty Mountain allotments,which have a higher percentage of steep terrain than the other allotments, would be particularly susceptible.

However, the increase in erosion which would occur after unplanned, uncontrolled fires would probably be susbstantially greater than the increase in erosion from prescribed burning (Winslow, pers. comm.) Uncontrolled fires are generally much hotter because they occur under much drier conditions than prescribed burns. In addition, larger areas are likely to be burned. These factors would cause greater consumption of plant cover and organic matter and increase the intensity of water repellency in the soil.

Vegetation

Prescribed Burning

Prescribed burning would reintroduce successional stages in chaparral on 5000 acres, improving these potentially grazing-suitable acres to suitable grazing-acres for approximately five years following the burn.

The successional species and rate varies in relation to location, slope, exposure, soils, and season of burn. Menke and Villasenor (1977) described this general successional pattern as follows:

1. During the first 1-3 years, annual and biennial heraceous species, sprouters and brush seedlings cover the area. Species diversity is greatest at this time and decreases as succession continues. Sampson and Burcham (1954) estimated the grazing capacity for cattle in mixed chaparral after burning. These estimates were used as a data base for establishing the forage production figures shown in Table 4-1.

2. The second stage is from 5-10 years and is marked by the absence of herbaceous species. Intermediate and permanent successional brush species are both present.

3. From 15-30 years, the intermediate shrub species such as ceanothus begin to die. Chamise increases its dominance and the standing dead material begins to build up a heavy fuel load.

TABLE 4-1
ANIMAL UNIT MONTHS AVAILABLE
AFTER PRESCRIBED BURNING

Allotment Name	Allotment Number	Current Forage Allocation	Acres Identified for Burning	Estimated Potnetial Forage Allocation After Burning for Alternative
Beauty Mtn.	6009	1452	1000	1800
Clover Flat	7012	715	1000	1000
Hauser Mtn.	7024	66	1000	120
Otay Mtn.	7035	222	1000	350
Potrero	7046	726	500	780
Tule Valley	6027	172	500	220
		3,500	5,000	4,270

4. Beyond 35 years, the stand becomes decadent with little vitality and productivity. Dead material is a large part of the stand and in most cases a wildfire burns it before this stage.

Rare, Threatened, and Endangered Plants

Table 4-2 indicates the potential for impacts on sensitive plants from both prescribed burning and from grazing. Estimated impact severity is based primarily on field observation and professional judgement due to the limited amount of literature available on these particular plants. The column "grazing use of plant" indicates the species' relative palatability to livestock. "Potential grazing damage" indicates the plative degree to which grazing may directly damage the plant. While a plant may be highly susceptible to damage where grazing occurs, the species as a whole may not necessarily decline due to the limited distribution of livestock and plants in the majority of the allotments. For example, livestock are confined to the far western portion of the Otay Mountain allotment and rarely utilize most of its steep, chaparral-covered terrain. Potential fire impacts indicate the relative susceptibility of a species to fire damage due to, for example, a species' structural characteristics. In many cases, this damage would be less from prescribed burns conducted in cooler, moister situations than from unplanned burns which normally occur in hot, dry months: a prescribed burn will generate typical temperatures of 850° to 1000° at 30 inches above ground compared to 2000° to 2500° from an unplanned burn (Ogan, pers. comm.)

Wildlife

The removal of vegetation due to livestock grazing can severely reduce total vegetation used by wildlife for both food and cover. Under appropriate grazing levels, this confict can be minimal. Grazing may result in a change in vegetation composition; this may result in a change in wildlife species composition and/or relative abundances. Livestock may pollute wildlife waters and fish habitat through defecation or trampling. Springs would be fenced and troughs constructed where this occurs; no fencing of riparian habitat is proposed.

Wildlife would benefit from the development of eight new springs and two new reservoirs. The prescribed burning of 5,000 acres of dense chaparral will increase habitat interspersion and improve plant vigor on many key wildlife forage species such as tree poppy, mountain mahogany, buckbrush, and whidethorn. Repetitive burning resulting in conversion to grassland would be detrimental only on a very large scale.

The proposed grazing program would have no significant impact on the Bald Eagle or any other federally listed species. None of the allotments border on major reservoirs. Where Bald Eagles occasionally forage away from reservoirs in nearby valleys, grazing may alter or may have altered small mammal relative abundances. However, populations of major prey species such as ground squirrels and rabbits would still occur in substantial numbers.

If Least Bell's Vireo nesting sites are discovered, protective measures (e.g., fencing) would be taken to prevent degradation due to livestock trampling or foraging. No major riparian areas are known to occur in any of the allotments.

TABLE 4-2
POTENTIAL FOR IMPACTS ON
RARE, THREATENED AND ENDANGERED PLANTS
OCCURRING IN EXISTING CLASS I ALLOTMENTS*

Plant	Grazing Use of Plant	Potential Grazing Damage	Potenial Fire Impacts
Dudleya variegata	L	L	M
Ferocactus viridescens	L	L	H
Calamagrostus densa	H	L to M	L
Arctostophylos otayensis	M to H	M	M to H
Brodiaea orcuttii	L	M	L
Monardella hypolenca ssp. Canata	L	L	M
Calochortus dunnii	L	M	L
Pogogyne mudiuscula	L	H	H
Fremontodendron mexicanum	M	M	M
Dichondra occidentalis	M	M	L
Eryngium aristulatum var. parishii	M	M	M
Lepchinia ganderi	L	M	M
Canlanthus stenocarpus	L	L	M
Salanum tenilobatum	L	L	N
Brodiaea filifolia	L	H	L
Pogogyne abramsii	L	H	H
Satureja chandleri	L	M	M
Stipa diegoensis	H	L to M	L
Cupressus stephensonii	L	M	H
Cupressus guadalupensis ssp. forbesii	L	M	H
Aeanthomintha ilicifolia	L	H	H
Ribes canthariforme	M	M	M
Hemizonia floribunda	L	H	H
Linanthus bedlus	M	H	H
Molina interrata	L	M	L
Hemizonia conjugans	L	H	H

* H = High; M = Medium; L = Low; N = None

Three existing allotments (Diamond Valley, Rawson Valley, and Steele Peak) are within the range of Stephen's Kangaroo Rat. It is not known whether or not the species is actually present on any of these allotments. These allotments are to receive custodial management; no burning is proposed. Stephen's kangaroo rat favors open habitat with sparse perennial vegetation; known sites commonly have experience previous disturbance (Bleich).

Deer, as well as cattle, would benefit from prescribed burning, which can be an effective means of improving habitat. If properly done, burning would open up dense stands of brush which were previously too dense to enter, increase plant vigor of average brush species, germinate fire responsive seeds, and provide areas of grass and forb dominance which are important to does in the fawning season. Deer would especially benefit from the development of new water sources.

Cultural Resources

Range improvements and associated livestock use area would impact cultural resources through construction activities, livestock trampling, and trampling-related erosion.

Prescribed burns would destroy perishable artifacts (wooden artifacts, baskets, clothing, etc.). In addition, the intense heat from a burn could alter the magnetic field in pottery and destroy any potential for thermo-luminescence dating. Extreme heat also causes silicious stone artifacts to explode thus causing destruction of some sites.

Wilderness

Prescribed burning would not significantly impair the wilderness suitability of any of the affected wilderness study areas. Burning would be allowed under the Interim Management Policy (IMP) for lands under wilderness review since prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems such as those found throughout the study area (IMP Chapter III, H. 4 e., page 24). No range improvements that would impair wilderness suitability are proposed within any of the WSAs.

Socio-Economics

Due to the low dependency of the livestock industry on public lands in the EIS area, there would be no significant changes in regional income, flows, employment, spending patterns, population or community services. Those operators who would lose (-) or gain (+) 20 percent or more of their total forage supply have been assumed to be substantially affected. Table 4-3 shows the allocation levels and dependency factors for Class I allotment operators.

TABLE 4-3
IMPACTS ON LIVESTOCK OPERATORS
CLASS I ALLOTMENTS

	Small	Medium	Large
Number of Operators	2	2	2
Total AUMs obtained from Escondido Project Area Allotments	1000	1920	1350
% Change in AUMs from Existing Situation	+11.4	+26.5	+44.1
Number of Operators Sustantially Impacted (Threshold: 20% of Total Annual Forage Supply	+1	+1	0

ALTERNATIVE 2:
INCREASED LIVESTOCK GRAZING

Soils

General impacts on soils would be as described for alternative 1. However, additional areas would receive prescribed burns within the new allotments. Those new allotments which are steepest and have the greatest potential for accelerated erosion after burning include Lancaster Valley, Rodriquez Mountain, and San Ysidro Mountain. However, the burning may result in less erosion than would occur under unplanned fires.

Vegetation

Prescribed burning would reintroduce successional stages in chaparral on 20,000 acres for approximately the first five years following the burn. Table 4-4 shows acres and estimated AUM increases from burning for each of the proposed allotments. Other burning impacts would be the same as described in Alternative 1.

Impacts on Rare, Threatened, and Endangered plants in existing allotments would be as described by Table 4-2. The potential for impacts in the proposed new allotments is indicated by Table 4-5.

Wildlife

Impacts would be similar to those described under Alternative 1 except for the following. Nine new allotments would increase overall effects of grazing on 35,322 acres. These new allotments would require 12 additional spring develop-

TABLE 4-4
ANIMAL UNIT MONTHS AVAILABLE
AFTER PRESCRIBED BURNING
PROPOSED NEW ALLOTMENTS

Allotment Name	Allotment Number	Current Forage Allocation	Acres Identified for Burning	Estimated Potential Forage Allocation After Burning for Alternative
Alberhill	None	0	500	250
Anza Valley	None	0	0	100
Bautista Canyon	None	0	1000	320
Chihuahua Valley	None	0	2000	500
Lancaster Valley	None	0	1000	400
Rodriques Mtn.	None	0	1500	450
San Ysidro Mtns.	None	0	5000	700
Soboba	None	0	4000	600
Table Mtn.	None	0	0	0
TOTAL			15,000	3,320

TABLE 4-5
POTENTIAL FOR IMPACTS ON
RARE, THREATENED AND ENDANGERED PLANTS
OCCURRING IN PROPOSED CLASS I ALLOTMENTS*

Allotment/Plant	Grazing Use	Potential Grazing Damage	Potential Fire Impacts
Bautista Canyon			
Galium californicum ssp. primum	M	M	L
Rodriguez Mountain			
Linanthus orcuttii	L	H	H
Delphinium hesperium var. cuyamacae	L	M	M
Lancaster Valley			
Chaenactis parshii	M	H	H
Penstemon californicus	L	M	L
Linanthus orcuttii	L	M	L
Cordylanthus mollis ssp. hispidus	L	M	L
Chihuahua Valley			
None			
Table Mountain			
Salvia eremostadya	L	M	L
Chaenactis parshii	M	H	H
Anza Valley (within five miles)			
Penstemon californicus	L	M	L
Chaenactis parshii	M	H	H
Arabis johnstonii	M	M	L
Layia ziegleri	M	M	H
Alberhill			
None			

* H=high potential for impacts, M=medium, L=low.

ments and two additional reservoirs. These would benefit wildlife. An additional 15,000 acres of prescribed burning would further enhance wildlife habitat value.

Two of the proposed new allotments, Alberhill and Bautista Canyon, are within the range of the Stephen's Kangaroo Rat, although it is not known whether the species is actually present on the allotments. Prescribed burning would probably not occur in it's habitat, since the species prefers open areas with widely spread perennial shrubs. Potential impacts would be analyzed during the environmental assessment required for each burn.

Cultural Resources

Impacts would be described for alternative 1.

Wilderness

The proposed San Ysidro Mountains grazing allotment lies within the Western and Southern Otay Mountain WSA. No new grazing allotment could be established until after a Congressional designation of this area as non-wilderness.

Other impacts would be as described for alternative 1.

Socio-Economics

Impacts would be as described for alternative one for existing allotments. Establishing the nine proposed new allotments and implementing the prescribed burning program would provide 3320 additional AUMs on public lands within the study area, for a total of 7590 AUMs, a 73 percent increase over the presently available 4378 AUMs.

ALTERNATIVE 3:
DECREASED GRAZING

Soils, Vegetation, and Wilderness

Impacts would be similar to those described for alternative 1.

Wildlife

The elimination of livestock on 16 allotments will remove livestock impacts, especially competition for forage, on 4,624 acres. Improvements benefiting wildlife (i.e., spring developments, reservoir construction, prescribed burning) will be the same as alternative 1.

Socio-Economics

Impacts on livestock operators would be as described for alternative one on the twelve allotments which remain under active management. There would be no

significant impact on those operators of allotments with small acreage and AUM production which would be placed under free use permits. Any small allotments which would be cancelled could result in the operator's loss of all available livestock forage from public lands; however, most small lessees are part-time operators with other income sources and are not expectd to be significantly affected.

ALTERNATIVE 4:
NO GRAZING

Soils

Less frequent unplanned fires could occur instead. This would result in increased erosion for the reasons outlined for alternative 1.

Vegetation

The elimination of livestock grazing would have no significant short term effect on vegetation. Over a longer period of time, chaparral would overgrow some areas which have been opened by constant grazing. Fire hazards would increase, particularly in areas of high annual growth, due to an increase in dangerous fire fuels as vegetative material accumulated.

Wildlife

Impacts of livestock grazing would be totally eliminated. Improvements benefiting wildlife, such as spring developments, reservoir construction, and prescribed burning, would not be implemented.

Cultural Resources and Wilderness

All grazing-related impacts would cease.

Socio-Economics

Although elimination of livestock grazing would have adverse impacts on the livestock operators, impacts on the regional economy would not be significant due to the low dependency of livestock grazing on AUMs from public land. Additionally, most of the lessees are part-time operators, with other income sources. Table 4-6 shows the impacts which would be expected on Class I allotment operators.

TABLE 4-6
IMPACTS ON LIVESTOCK OPERATORS
CLASS I ALLOTMENTS

	Small	Medium	Large
Number of Operators	2	2	2
Total AUMs obtained from Escondido Project Area Allotments	0	0	0
% Change in AUMs from Existing Situation	-100	-100	-100
Number of Operators Substantially Impacted (Threshold: 20% of Total Annual Forage Supply	-2	-1	0

MITIGATION

All mitigation proposed is described in Chapter 2 as part of the description of the alternatives under "Standard Operating Procedures."

UNAVOIDABLE ADVERSE IMPACTS

Alternative 1 - Proposed Action

- Increased erosion in burned areas (5,000 acres), although less than would occur as a result of unplanned fires.
- High potential for some impacts on sensitive plants: seven species from grazing, and seven species from prescribed burning.
- Continued moderate degradation of cultural resources from trampling, construction, and prescribed burning (5,000 acres).

Alternative 2 - Increase Livestock Grazing

- Increased erosion in burned areas (20,000 acres), although less than would occur as a result of unplanned fires.
- High potential for some impacts on sensitive plants: nine species from grazing, ten species from fire.

- Continued moderate degradation of cultural resources from trampling, construction, and prescribed burning (20,000 acres).

Alternative 3 - Decreased Grazing

- Same as Alternative 1. In addition:

- Loss of grazing-related income where allotments cancelled.

Alternative 4 - No Grazing

- Increased erosion from unplanned fires if prescribed burning for non-livestock management purposes does not occur.

- Accumulation of fire fuel due to increase chaparral.

- Loss of grazing-related income.

- Two small and one medium livestock operators of Class I allotments would lose more than 20 percent of their total annual forage supply.

TRADE-OFFS BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Prescribed burning in grazing alternatives 1, 2, and 3 would initially increase erosion by eliminating ground cover, removing the burned acrs from livestock use for at least two growing seasons., and creating visual impacts. However, in the long term, forage production will rise, range condition will improve, and vegetation cover will increase, allowing additional livestock grazing and decreased surface erosion.

IRREVERSIBLE AND IRRETRIEVALBE COMMITMENTS OF RESOURCES

Lands proposed for range improvement facilities will result in a small loss of soil due to disturbance and soil loss due to erosion on some sites. Vegetation destroyed as a result of proposed range improvements such as fences, pipelines, and water placement facilities such as troughs and storage tanks will be for the most part irretrievalbe. Cultural resources altered by construction, trampling, or burns would be irretrievably lost. No additional information related to the resources beyond what was collected before their removal or destruction will be available.

CHAPTER 5
CONSULTATION AND COORDINATION

CHAPTER 5
CONSULTATION AND COORDINATION

PUBLIC AND AGENCY INVOLVEMENT

Four public meetings were held in April 1981, to sample the public's opinion on possible transfer of remote and difficult-to-manage parcels of land lying outside the CDCA. Input from the public relating to the Otay Grazing EIS was also solicited.

Among the few comments which were made at the meetings relating to the grazing aspects of the public lands were: 1) the Soil Conservation Service should be invited to advise on the possible impacts from erosion, 2) few, if any, of the specific grazing operations were known to have unacceptable adverse impacts, such as negative effects upon endangered plant species, and 3) operators presently grazing subject lands should be given first preference if those lands were eventually to be traded or sold to the public.

In summation, all but one of those attending did not see grazing as a significant issue or problem.

AGENCIES AND ORGANIZATIONS
TO WHOM COPIES OF THIS DOCUMENT ARE
BEING SENT

FEDERAL

Environmental Protection Agency

Advisory Council on Historic Preservation

U.S. Department of the Interior
- Bureau of Mines
- Bureau of Reclamation
- Geological Survey
- Fish and Wildlife Service
- Bureau of Indian Affairs
- Mineral Management Service
- Natural Resource Library

U.S. Department of Agriculture
- Environmental Quality Affairs
- Forest Service
- Soil Conservation Service
- Animal Health Services

U.S. Senators (California)

U.S. House of Representatives (Escondido Project Area)

Department of Commerce

Department of Justice
- Border Patrol
- Customs

Department of Treasury

CALIFORNIA - STATE AGENCIES

Office of the Governor

Office of Planning and Research

State Historic Preservation Office

Resources Agency

- Department of Water Resources
- Air Resources Board
- Division of Mines and Geology
- Division of Oil and Gas
- Division of State Lands
- Native American Heritage Commission Service
- Department of Fish and Game
- Department of Parks and Recreation
- Department of Forestry

University of California at Los Angeles, Department of Biology

University of California at San Diego

Muir College

San Diego State University

CALIFORNIA - LOCAL AGENCIES

Riverside County Board of Supervisors

Riverside County Planning Department

Riverside County Department of Fire Protection

Riverside County Parks Department

San Diego County Board of Supervisors

San Diego County Office of Fire Services

San Diego County Department of Planning and Land Use

San Diego County Parks and Recreation

San Diego County Air Pollution Control

San Diego Agricultural Commissioners Office

San Diego County Farm Advisor

San Diego Association of Governments (SANDAG)

OTHER ORGANIZATIONS

Natural Resources Defense Council, Inc.

Sierra Club

California Native Plant Society

Audubon Society

Desert Bighorn Council

Wilderness Society

California Wildlife Federation

San Diego Cattlemen's Association

American Motorcyclist Association, Distict 38

Boy Scouts of America

San Diego County Archaeological Society

Pacific Crest Trail Blazers

Desert Protective Council

Citizens ORV Committee

Southwestern Prospectors and Miners

Nature Conservancy

California Association of 4 Wheel Drive Clubs

California Off Road Vehicle Association

California Desert District Grazing Advisory Board

Desert Area Research Team

LIST OF PREPARERS

Name	EIS Assignment
William Haigh	Team Leader, Socio-Economics
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John Adams	Soils
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Larry Foreman	Wildlife
Roberta Grannis	Clerical Support
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GLOSSARY

Acronyms

AMP	Allotment Management Plan
AUM	Animal Unit Month
BLM	Bureau of Land Management
EIS	Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
HMP	Habitat Management Plan
IMP	Interim Management Policy
MFP	Management Framework Plan
RPMOA	Rangeland Programmatic Memorandum of Agreement
RT or E	Rare, Threatened, or Endangered
SCS	Soil Conservation Service
URA	Unit Resource Analysis
WSA	Wilderness Study Area

Terms

ACTUAL USE: The amount of livestock use actually grazed.

ALLOTMENT: An area of land where one or more operators graze their livestock. It generally consists of public lands, but may include parcels of private or state owned lands. The number of livestock and period of use are stipulated for each allotment. An allotment may consist of several pastures or be only one pasture.

ALLOTMENT MANAGEMENT PLAN (AMP): A livestock grazing management plan dealing with a specific unit of rangeland, and based on multiple-use resource management objectives. The AMP considers livestock grazing in relation to other uses of the range and in relation to renewable resources - watershed, vegetation, and wildlife. An AMP establishes the seasons of use, the number of livestock to be permitted on the range, the range improvements needed, and the grazing system.

ANIMAL UNIT: The equivalent of one mature (1,000 lb.) cow or 5 sheep based upon average daily forage consumption of 26 lbs. dry matter per day.

ANIMAL UNIT MONTH (AUM): (1) The amount of feed or forage required by an animal unit for one month (i.e., 800 lbs./month). (2) Tenure of one animal-unit for a period of one month.

ANNUALS: Plants produced from seed which complete their life cycle in one growing season.

ARCHAEOLOGICAL RESOURCES: Sites, areas, structures, objects, or other evidence of prehistoric or historic human activities.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Areas within the pbulic lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

ASSOCIATION (soil): A map unit in which two or more name components occur in each delineation in described proportion and pattern. The component soils can be located in the field by landscape features. The named components are individually large enough to be delineated at a 1:20,000 scale.

BROWSE: The tender shoots, twigs, and leaves of trees and shrubs often used as food by cattle, deer, elk, and other animals; or to feed or eat on browse.

CAMPSITES: Areas of permanent habitation (villages), and temporary camps. Tend to be located near water near utilized resources.

CLIMAX: The highest ecological development of a plant community capable of perpetuation under the prevailing climate and soil conditions (Range Term Glossary Committee, 1974).

COMPETITIVE FORAGE: Forage which is being utilized by more than one grazing animal at the same period of time or in the same areas.

COW-CALF LIVESTOCK OPERATION: A livestock operation in which a base breeding herd of mother cows and bulls is maintained. The cows produce a calf crop each year, and the operation keeps some heifer calves from each calf crop for breeding.

CRITICAL WILDLIFE HABITAT: That portion of the living area of a wildlife species that is essential to the survival and perpetuation of the species either as individuals or as a population.

CULTURE AREAS: Geographical regions where a similarity of cultural forms of the occupants of a region are found through ethnographic and archaeological studies.

CULTURAL RESOURCES: Those fragile and nonrenewable remains of human activity, occupation, or endeavor, which are reflected in district sites, structures, buildings, objects, artifacts, ruins, works of art, architecture or natural features.

DEFERRED ROTATION GRAZING: Systematic shifts in grazing within an allotment in succeeding years, allowing each part to rest successively in the growing season to permit seed production, seedling establishment, and improvement in plant vigor.

DEPENDENCY: The amount of forage provided by public lands, expressed as a percentage of a herd's total forage requirements for one complete year. The forage requirement is based on the ranch's total herd.

ENDANGERED SPECIES: Any species which is in danger of extinction throughout all or a significant portion of its range.

EPHEMERAL RANGE: Range consisting primarily of annual plants which varies in production annually according to fluctuations of precipitation and temperature.

EPHEMERAL STREAM: A stream which only flows for a short time each year in direct reponse to precipitation events.

FORAGE: All browse and heraceous foods that are available to grazing animals.

GRAZING PERMIT: A document authorizing use of the public lands for the purpose of grazing livestock.

GRAZING SYSTEM: A systematic sequence of grazing use and nonuse of an allotment.

HABITAT: The natural environment of a plant or animal.

INTENSIVE MANAGEMENT: Management using range improvements and scientific techniques, including grazing systems, to maximize sustained yields of animals and forage production.

INTERIM MANAGEMENT POLICY: The Bureau's management policy for lands under wilderness review. The policy is to continue resource use on lands under wilderness review in a manner that maintains the area's suitability for preservation as wilderness (referred to as the "Nonimpairment" Standard).

LIVESTOCK GRAZING LICENSE: An authorization which permits the grazing of a specified number and class of livestock on a designated area of BLM grazing lands for a period of time.

LIVESTOCK OPERATION: An economic enterprise for the purpose of producing livestock.

LIVESTOCK OPERATOR: A person who grazes livestock on public lands.

MANAGEMENT FRAMEWORK PLAN (MFP): A land use plan for public lands which provides a set of goals, objectives, and constraints for a specific planning area to guide the development of detailed plants for the management of each resource.

NATIONAL REGISTER OF HISTORIC PLACES: The official list, established by the Historic Preservation Act of 1966, of the nation's cultural resources worthy of preservation.

NATIONAL REGISTER PROPERTY: A district, site, building, structure, or object included in the National Register.

PERENNIAL RANGE: Range with a predominance of platns with a life cycle of three or more years.

PERMITTEE: Holder of a license or permit for grazing of livestock on an allotment.

PLANT SUCCESSION: The process of vegetational development whereby an area becomes successively occupied by different plant communities of higher ecological order.

PREFERENCE: Grazing privileges established following the passage of the Taylor Grazing Act, based on the use of the Federal range during the priority period. The active preference and suspended preference together make up the total grazing preference.

PUBLIC LAND: Land administered by the Bureau of Land Management.

RANGE CONDITION (ECOLOGICAL): The present state of the vegetation of a range site in relation to the climax (natural potential) plant community for that site. Measured as a percentage of the present plant community that is climax for the range site.

RANGE DEVELOPMENT: Any structure or excavation that facilitates management of range or livestock.

RANGELAND SUITABILITY: A measure of an area's ability to be used for livestock grazing using four major criteria (distance to water, degree of slope or other physical barriers, forage production, and watershed condition) which are evaluated independently or in various combinations to arrive at a suitability class.

RIPARIAN: Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to the plants of all types that grow rooted in the watertable of streams, ponds, and springs.

SEASON-LONG GRAZING: Yearlong grazing without rest periods.

SEASON OF USE: That period of time, as designated in planning documents, within which livestock grazing can be authorized.

SOCIO-ECONOMICS: Relating to or involving a combination of various social and economic factors.

SOIL COMPACTION: The process of increasing the bulk density of the soil through the compression of large voids. Reduction of the air spaces in the soil will result in overland flow of water and surface erosion occurring with less intense storms. Soil compaction can also significantly reduce plant vigor by reducing the gas exchange (CO_2 and O_2) in the root zone, by reducing the transport rate of nutrients through the soil, and by creating a physical impedence to root penetration.

STOCKING RATE: The number of animals on a specific area at a specific time, usually expressed in acres/AUM.

THREATENED SPECIES: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

UNIT RESOURCE ANALYSIS (URA): A comprehensive display of physical resource data and an analysis of the current use, production, condition, and trend of the resource and the potentials and opportunities within the planning unit.

UNSUITABLE RANGE: An area which may have value for wildlife, but is unsuitable for livestock because of barrenness, lack of forage, unstable soils, or physical barriers such as steep topography, rock, or dense timber.

UTILIZATION: The amount of vegetation of foilage removed from a plant by grazing animals. Ususally expressed as a percent of the plants total annual weight.

VEGETATION TYPE: A plant community with visually distinguishable characteristics, based upon and named after the apparent dominant plant species.

WILDERNESS AREA: (1) An area formally designated by Congress as part of the National Wilderness Preservation System. (2) An area formally designated as part of the State of California's Wilderness Preservation System.

WILDERNESS NON-SUITABILITY: A management recommendation, based on the application of wilderness suitability criteria, that the best use of the resources comprising a Wilderness Study Area would be met without designation of the WSA as a component of the National Wilderness Preservation System, permitting uses which might not necessarily be comparible with wilderness values.

WILDERNESS SUITABILITY: A management recommendation, based on the application of wilderness suitability criteria, that the best use of the resources comprising a Wilderness Study Area be designation of the WSA as a component of the National Wilderness Preservation System.

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APPENDIX

APPENDIX A

RANGE SUITABILITY CRITERIA

Suitable

Suitable grazing lands are those lands that produce average 600 lbs of dry weight of standing crop per acre during all but drought years, do not have serious erosion problems, and for which slope is less than 60 percent.

Potentially Suitable

Potentially suitable grazing lands are those lands that have the potential to produce an average 600 lbs. of dry weight of standing crop per acre on all but drought years; do not have a serious erosion problem; do not have soils that are prone to erosion; and have less than 60% slope. Many of these lands are covered by dense chaparral which may require prescribed burning to produce suitable grazing lands.

Unsuitable

Unsuitable grazing lands are those ladns that produce less than an average 600 lbs. of dry weight of standing crop per acre for most years; and/or have serious erosion problems; and/or have greater than 60% slope, and/or have other uses that are not compatible with livestock grazing (ie., cultural sites, mining, etc.); and/or hazards to livestock.

APPENDIX B

EXPLANATION OF RARE, THREATENED
AND ENDANGERED PLANT CODES

CALIFORNIA NATIVE PLANT SOCIETY (CNPS) R-E-V-D Code

R (Rarity)

1. Rare, but found insufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.

2. Occurrence confined to several populations or to one extended population.

3. Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

E (Endangerment)

1. Not endangered.

2. Endangered in a portion of its range.

3. Endangered throughout its range.

V (Vigor)

1. Increasing or stable in number.

2. Declining in number.

3. Approaching extinction or extirpation.

D (Distribution)

1. More or less widespread outside California.

2. Rare outside California.

3. Endemic to California.

An R-E-V-D Code of 3-3-3-3 would indicate that the plant in question is limited to one population or a few restricted ones, is endangered throughout its range, is approaching extinction, and is endemic to California.

FISH AND WILDLIFE SERVICE CATEGORIES AND TABLES

Categories

Categories reflect Fish and Wildlife Service's evaluation of plants "under review." Category 1 are taxa for which the Service has sufficient information to support its listing as Endangered or Threatened. Category 2 are taxa from which present information indicates the probable appropriateness of listing as Endangered or Threatened (see 45 FR 82480-81). All plants "under review" receive full protection under the Endangered Species Act. Category 3c are taxa that are not subject to any identifiable threat, or may be more widespread than previously believed. They are listed here since, for a variety of reasons, they are still species of concern in this area. If further research indicates any significant decline in any of these taxa, they could be re-evaluated for inclusion in Table 1 or 2.

TABLES[1]

Table 1 contains the name of all taxa presently on the list of Endangered plants. The left-hand column indicates status (E-Endangered, T-Threatened).

Table 2 contains the names of all taxa that have been proposed for listing under the Act, but for which final action has not yet been taken.

Table 3 lists all taxa in categories 1 and 2 (candidates), as explained above. The left-hand column indicates category.

Table 4 lists all taxa in category 3, with the left-hand column indicating sub-categories.

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[1] From Federal Register notice published in Vol. 45, No. 242, December 15, 1980.

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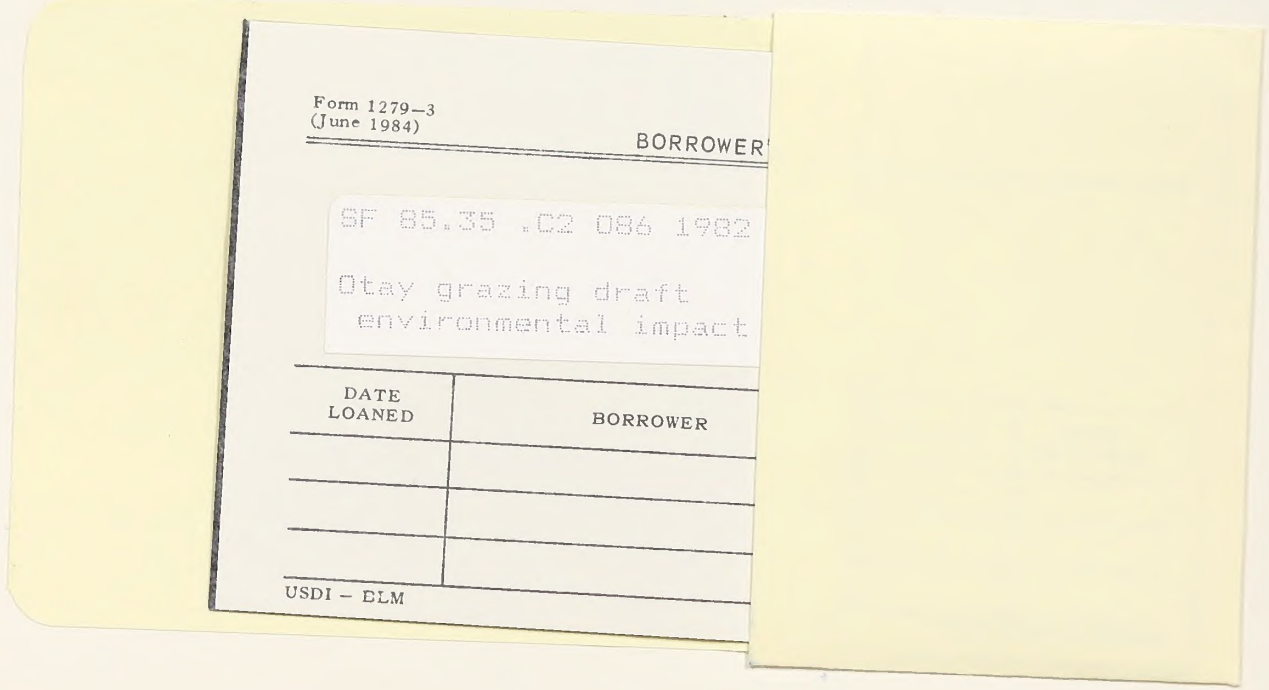
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